

REMARKS/ARGUMENTS

The remarks below are identical to those set forth in the prior response of June 1, 2004 and are reiterated for the convenience of the examiner.

Claims 12-15, 17, 19-28 and 30-41 are active. Claims 1, 2 and 8-11 have been withdrawn from consideration. Independent Claim 12 has been amended to more clearly refer to the coding portion of SEQ ID NO: 1, which encodes the polypeptide of SEQ ID NO: 2. Claims 12 and 19 incorporate the definitions of CCS52Ms and CCS52Mt disclosed on page 2, lines 19-25, of the specification. Other editorial changes have been made to the claims to improve their clarity. Accordingly, the Applicants do not believe that any new matter has been added.

The Applicants thank Examiner Collins for the courteous and helpful interview of April 22, 2004. It was indicated that the prior art rejections would likely be withdrawn, if the Applicants revised the claims to more clearly indicate that the WD40 repeats are part of the longer sequence encoded by SEQ ID NO: 1. Independent Claim 12 has now been amended to clearly refer to the coding portion of SEQ ID NO: 1, which encodes the full-length polypeptide of SEQ ID NO: 2. SEQ ID NO: 2 encompasses these WD40 repeats, see Fig. 1. Amendments which would help address the rejections under 35 U.S.C. 112 were also discussed. It was also suggested that the Applicants might amend the claims to describe what the acronyms CCS52Ms and CCS52Mt mean. These acronyms are now described in the claims. In view of the above amendments, favorable consideration is requested.

Rejection—35 U.S.C. 112, first paragraph

Claims 12-28, 30 and 32-41 were rejected under 35 U.S.C. 112, first paragraph, as lacking adequate description or enablement for the claimed genus. The Applicants submit

that this rejection may now be withdrawn in view of the amendment of independent Claim 12 to describe the claimed nucleic acid sequences structurally (by reference to SEQ ID NO: 1 or 2) and functionally (by reference to their ability to encode polypeptides that inhibit mitosis and induces endoreplication). In accord with the Description Guidelines, Claim 12 now refers to sequences with a high degree of structural similarity, because they either encode the full length polypeptide of SEQ ID NO: 2 or hybridize to the coding region of SEQ ID NO: 1 under stringent conditions. Moreover, the claims are now directed to sequences which encode polypeptides which inhibit mitosis and endoreplication. The level of skill in the molecular biological arts is high, generally, graduate or post-graduate level. Accordingly, the Applicants respectfully submit that the structural definition, including the required highly stringent conditions, in combination with the coding function of DNA and the level of skill and knowledge in the art are adequate to determine that the Applicant had possession of the invention as of the filing date.

Rejection—35 U.S.C. 112, second paragraph

Claims 16-19 were rejected under 35 U.S.C. 112, second paragraph, as being indefinite for reciting the acronym CCS52Ms or CCS52Mt. These rejections are moot in view of the amended claim language.

Rejection—35 U.S.C. 112, second paragraph

Claims 16, 18 and 29 were rejected under 35 U.S.C. 112, second paragraph, as being indefinite for reciting “% similar”. These rejections are moot in view of the amended claim language

Rejection—35 U.S.C. 102

Claims 12-23 and 26-29 were rejected under 35 U.S.C. 102(b) as being anticipated by Zhou et al., Mol. Gen. Genet. 257:387. The Applicants submit that this rejection is moot in view of the clarification of the claim language. As discussed, Zhou et al. do not disclose or suggest a sequence encoding the polypeptide of SEQ ID NO:2. The claims have now been directed to a sequence encoding the full-length polypeptide of SEQ ID NO: 2, or sequences which hybridize under stringent conditions to this sequence. Zhou, see e.g., page 388, col. 2, fig. 1, is directed to a nucleic acid which encodes COP1. While fig. 1 refers to one half and one full WD-40 repeat, these repeats are not part of SEQ ID NO: 2.

Rejection—35 U.S.C. 103

Claims 24 and 25 were rejected under 35 U.S.C. 103(a) as being unpatentable over Zhou et al., Mol. Gen. Genet. 257:387, in view of allegedly admitted prior art. The Applicants respectfully submit that this rejection depends on Zhou and that Zhou has been overcome for the reasons set forth above for the anticipation rejection.

CONCLUSION

In view of the above amendments and remarks, the Applicants respectfully submit that this application is now in condition for allowance. Early notification to that effect is earnestly solicited.

Respectfully submitted,

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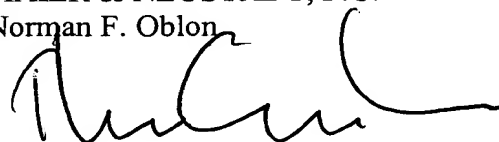
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